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CLAIMS

- ART 31 AMENDMENT
1. A process for producing *Aspergillus niger* cultures with a broad spectrum of enzymatic activity comprising enzymes which degrade the parietal polysaccharides and ferulate esterases, which process is characterized in that it comprises culturing at least one *Aspergillus niger* strain in the presence of at least one inducing carbon-containing source chosen from the group consisting of:
- 5 - beetroot pulp or at least a soluble fraction thereof rich in feruloylated oligosaccharides, which can be produced by acid hydrolysis;
- 10 - a cereal bran, in particular a maize bran, or a mixture of brans of various cereals, or at least a soluble fraction thereof rich in feruloylated oligosaccharides, which can be produced by autoclaving said bran or said mixture.
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2. The process as claimed in claim 1, characterized in that the inducing carbon-containing source is present in said culture medium at a concentration of between 1 and 50 g/L, and preferably between 2.5 and 30 g/L.
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3. The process as claimed in either of claims 1 and 2, characterized in that the *Aspergillus niger* culture comprises at least the CNCM I-1472 strain.
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4. A process for producing an enzymatic preparation with a broad spectrum of activity comprising enzymes which degrade the parietal polysaccharides and ferulate esterases, characterized in that it comprises carrying out the process as claimed in any one of claims 1 to 3, and recovering the culture supernatant.
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5. An enzymatic preparation, characterized in that it can be produced using the process as claimed in claim 4.
- 5 6. A process for producing free ferulic acid from a feruloylated substrate, which process is characterized in that it comprises bringing said substrate into contact with at least one *Aspergillus niger* culture produced using the process as claimed in any one of claims 1 to 3, or with at least one enzymatic preparation as claimed in claim 5, under conditions which allow the release of the ferulic acid by the enzymes present in said culture or said enzymatic preparation.
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7. The process as claimed in claim 6, characterized in that the feruloylated substrate is chosen from:
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- beetroot pulp or at least a soluble fraction thereof rich in feruloylated oligosaccharides, which can be produced by acid hydrolysis;
- a cereal bran, in particular a maize bran, or a mixture of brans of various cereals, or at least a soluble fraction thereof rich in feruloylated oligosaccharides, which can be produced by autoclaving said bran or said mixture.
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8. The process as claimed in either of claims 6 and 7, characterized in that an amount of feruloylated substrate corresponding to 0.1 to 50 g of ferulic acid per liter of culture medium is added to the *Aspergillus niger* culture medium.
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9. The process as claimed in either of claims 6 and 35 7, characterized in that the enzymatic preparation is mixed with an amount of feruloylated substrate corresponding to 0.1 to 40 g of ferulic acid per
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- gram of total proteins of the enzymatic preparation.
10. The process as claimed in any one of claims 6 to 9, characterized in that the *Aspergillus niger* culture or the enzymatic preparation is produced in the presence of an inducing carbon-containing source comprising beetroot pulp or at least a fraction thereof rich in feruloylated oligosaccharides, which can be produced by acid hydrolysis, and in that the feruloylated substrate comprises at least one cereal bran or at least a fraction thereof rich in feruloylated oligosaccharides, which can be produced by autoclaving.
15. The process as claimed in any one of claims 6 to 8 or 10, characterized in that it also comprises the bioconversion to vanillic acid, by said *Aspergillus niger* culture, of the ferulic acid released from the feruloylated substrate.
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